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(54) Title: METHOD OF PROCESSING MULTICOMPONENT, COMPOSITE AND COMBINED MATERIALS AND USE OF SO SEPARATED COMPONENTS

(57) Abstract: The nature of the method of treating multicomponent, composite and combined materials, consisting of organic and inorganic, non-metallic and metallic components and especially of waste from electronic and electric devices and equipments, consists in that the treated materials are pretreated by removing contaminating components containing toxic heavy metals and polychlorinated biphenyls, by grinding the waste to particles having the size of 5 to 25 µm at most, and they are subjected, in an inert or reducing environment at a temperature of 350 °C to 600 °C and at a pressure of 100 kPa to 10 MPa, to the action of blades of a rotational mechanism for 10 seconds to 10 minutes, and to the action of a moving bed of solid particles of a substance, performing whirling motion. In this way there occurs depolymerization, cracking and state transformation of macromolecular, solid and liquid organic fractions and their separation from the composite material in the form of organic vapours and gases, and disintegration of inorganic non-metallic fractions to small particles and increase of metal concentration in the inorganic phase.



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